State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-346
Relating to Certification of New Motor Vehicles

TOYOTA MOTOR CORPORATION

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1999 model-year Toyota Motor Corporation exhaust emission control systems are certified as described below for light-duty trucks:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: XTYXT02.0GXJ Displacement: 2.0 Liters (122 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Warm Up Three Way Catalytic Converter
Three Way Catalytic Converter
Air Fuel Ratio Sensor
Heated Oxygen Sensor
Exhaust Gas Recirculation
Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The non-methane organic gases (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) LEV certification exhaust emission standards for this engine family in grams per mile are:

Loaded Vehicle Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
0-3750	50,000	0.075	3.4	0.2	0.015	10.0
	100,000	0.090	4.2	0.3	0.018	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.94 RAF for 1999 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

Loaded Vehicle Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
0-3750	50,000	0.044	0.4	0.1	0.001	2.3
	100,000	0.046	0.4	0.2	0.001	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average NMOG exhaust mass emission requirements as set forth in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines").

BE IT FURTHER RESOLVED: That the vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 10th day of August 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

1999 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Eng Fam: XTYXT02.0GXJ Evap Fam: XTYXE0095AE1
All Eng Codes in Eng Fam: CA x 49S ___ 50S ___ AB965 ___ , ORVR: YES ___ NO x
Exh Std: CA Tier-1 ___ TLEV ___ LEV x ULEV ___ SULEV ___ , US EPA Tier-1 ___
Veh Class(es): PC ___ LDT1 x LDT2 ___ MDV1 ___ MDV2 ___ MDV3 ___ MDV4 ___ MDV5 ___
Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type(s): Dedicated x Flex-Fuel ___ Dual-Fuel ___ Bi-Fuel ___ Gasoline x Diesel ___
CNG ___ LNG ___ LPG ___ M85 ___ Other (specify) ___
Exh Emiss Test Fuel(s): Indo ___ CBG x CNG ___ LPG ___ M85 ___ Other (specify) ___
Diesel: 13 CCR 2282 ___ 40 CFR 86.113-90 ___ 40 CFR 86.113-94 ___
Evaporative Emission Test Procedure: California ___ Federal x
Service Accum: Std AMA ___ Mod AMA ___ Mfr ADP x Other (specify) ___
NMOG Test Procedure: N/A ___ Std x Equiv ___ R/L Test Proc: SHED x Pt Source ___
Engine Configuration: I-4 Displacement: 2.0 Liters 121.9 Cubic Inches
Valves per Cylinder: 4 Rated HP1: 125@5400 RPM
Engine: Front x Mid ___ Rear ___ Drive: FWD x*1 RWD ___ 4WD-FT ___ 4WD-PT x*2
Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI, EGR, A/F S(*3), WU-TWC, TWC, HO2S
(use abbreviations per SAE J1930 JUN93)

Note *1 : Applied to RAV4 2WD.
Note *2 : Applied to RAV4 4WD.
Note *3 : A/F S means Air-flow sensor

Engine Code (also list CA/49S/ 50ST	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
1	SXA10L-AKMGKA	M5	3125	10.0, 11.2	89661-42540 *4	25620-74320	Front : S25
	SXA10L-AZMGKA			9.7, 10.4	89661-42541 *5		Rear : U11
	SXA11L-AWMGKA		3250				
	SXA15L-AKMGKA		2875	8.7	89661-42520 *4		
	SXA15L-AZMGKA				89661-42521 *5		
	SXA16L-AWMGKA		3125				
2	SXA10L-AKMGKA		3125	11.1, 12.3	89661-42540 *4		
	SXA10L-AZMGKA			10.7, 11.4	89661-42541 *5		
	SXA11L-AWMGKA		3375				
	SXA15L-AKMGKA		3000	9.6	89661-42520 *4		
	SXA15L-AZMGKA				89661-42521 *5		
	SXA16L-AWMGKA		3125				

1999 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Eng Fam: XTYXT02.0GXJ Evap Fam: XTYXE0095AE1

Engine Code (also list CA/49S/ 50ST	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
3	SXA10L-AKPGKA	L4	3125	10.0, 11.2	89661-42550 *4	25620-74330	Front : S25
	SXA11L-AWPGKA		3375	9.7, 10.4	89661-42551 *5		Rear : U11
	SXA15L-AKPGKA		3000	8.7	89661-42530 *4		
	SXA15L-AZPGKA				89661-42531 *5		
	SXA16L-AWPGKA		3125				
4	SXA10L-AKPGKA		3250	11.1, 12.3	89661-42550 *4		
	SXA11L-AWPGKA		3375	10.7, 11.4	89661-42551 *5		
	SXA15L-AKPGKA		3000	9.6	89661-42530 *4		
	SXA15L-AZPGKA				89661-42531 *5		
	SXA16L-AWPGKA		3125				

Comments : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.
Note *4 : Before Field Fix 99-TF-3
Note *5 : After Field Fix 99-TF-3

VEHICLE MODELS:

RAV4 2WD	RAV4 4WD	RAV4 SOFT TOP 2WD	RAV4 SOFT TOP 4WD
SXA15L-AZMGKA	SXA10L-AZMGKA	SXA15L-AKMGKA	SXA10L-AKMGKA
SXA15L-AZPGKA	SXA11L-AWMGKA	SXA15L-AKPGKA	SXA10L-AKPGKA
SXA16L-AWMGKA	SXA11L-AWPGKA		
SXA16L-AWPGKA			